

# SEQUENCE LISTING

<110> Bristol-Myers Squibb Company

<120> A NOVEL HUMAN LEUCINE-RICH REPEAT CONTAINING PROTEIN EXPRESSED  
PREDOMINATELY IN SMALL INTESTINE, HLRSI1

<130> D0066NP

<150> US 60/257,774

<151> 2000-12-22

<160> 40

<170> PatentIn version 3.0

<210> 1

<211> 2689

<212> DNA

<213> homo sapiens

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<221> CDS

<222> (75)..(1949)

<400> 1

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                Met Leu Ala Gln Pro Gln Arg Leu Leu Phe Ile Leu
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Asp Gly Ala Asp Glu Leu Pro Ala Leu Gly Gly Pro Glu Ala Ala Pro
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Cys Thr Asp Pro Phe Glu Ala Ala Ser Gly Ala Arg Val Leu Gly Gly
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Leu Leu Ser Lys Ala Leu Leu Pro Thr Ala Leu Leu Leu Val Thr Thr
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cgc gcc gcc gcc ccc ggg agg ctg cag ggc cgc ctg tgt tcc ccg cag      302
Arg Ala Ala Ala Pro Gly Arg Leu Gln Gly Arg Leu Cys Ser Pro Gln
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tgc gcc gag gtg cgc ggc ttc tcc gac aag gac aag aag aag tat ttc      350
Cys Ala Glu Val Arg Gly Phe Ser Asp Lys Asp Lys Lys Lys Tyr Phe
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tac aag ttc ttc cgg gat gag agg agg gcc gag cgc gcc tac cgc ttc      398
Tyr Lys Phe Phe Arg Asp Glu Arg Arg Ala Glu Arg Ala Tyr Arg Phe
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gtg aag gag aac gag acg ctg ttc gcg ctg tgc ttc gtg ccc ttc gtg      446
Val Lys Glu Asn Glu Thr Leu Phe Ala Leu Cys Phe Val Pro Phe Val
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tgc tgg atc gtg tgc acc gtg ctg cgc cag cag ctg gag ctc ggt cgg      494

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 Leu Ile Ser Thr Phe  
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Phe Glu Ala Ala Ser Gly Ala Arg Val Leu Gly Gly Leu Leu Ser Lys  
 35 40 45

Ala Leu Leu Pro Thr Ala Leu Leu Leu Val Thr Thr Arg Ala Ala Ala  
 50 55 60

Pro Gly Arg Leu Gln Gly Arg Leu Cys Ser Pro Gln Cys Ala Glu Val  
 65 70 75 80

Arg Gly Phe Ser Asp Lys Asp Lys Lys Lys Tyr Phe Tyr Lys Phe Phe  
 85 90 95

Arg Asp Glu Arg Arg Ala Glu Arg Ala Tyr Arg Phe Val Lys Glu Asn  
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Glu Thr Leu Phe Ala Leu Cys Phe Val Pro Phe Val Cys Trp Ile Val  
 115 120 125

Cys Thr Val Leu Arg Gln Gln Leu Glu Leu Gly Arg Asp Leu Ser Arg  
 130 135 140

Thr Ser Lys Thr Thr Thr Ser Val Tyr Leu Leu Phe Ile Thr Ser Val  
 145 150 155 160

Leu Ser Ser Ala Pro Val Ala Asp Gly Pro Arg Leu Gln Gly Asp Leu  
 165 170 175

Arg Asn Leu Cys Arg Leu Ala Arg Glu Gly Val Leu Gly Arg Arg Ala  
 180 185 190

Gln Phe Ala Glu Lys Glu Leu Glu Gln Leu Glu Leu Arg Gly Ser Lys  
 195 200 205

Val Gln Thr Leu Phe Leu Ser Lys Lys Glu Leu Pro Gly Val Leu Glu  
 210 215 220

Thr Glu Val Thr Tyr Gln Phe Ile Asp Gln Ser Phe Gln Glu Phe Leu  
 225 230 235 240

Ala Ala Leu Ser Tyr Leu Leu Glu Asp Gly Gly Val Pro Arg Thr Ala  
 245 250 255

Ala Gly Gly Val Gly Thr Leu Leu Arg Gly Asp Ala Gln Pro His Ser  
 260 265 270

His Leu Val Leu Thr Thr Arg Phe Leu Phe Gly Leu Leu Ser Ala Glu  
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Arg Met Arg Asp Ile Glu Arg His Phe Gly Cys Met Val Ser Glu Arg  
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Val Lys Gln Glu Ala Leu Arg Trp Val Gln Gly Gln Gly Gln Gly Cys  
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Pro Gly Val Ala Pro Glu Val Thr Glu Gly Ala Lys Gly Leu Glu Asp  
 325 330 335

Thr Glu Glu Pro Glu Glu Glu Glu Gly Glu Glu Pro Asn Tyr Pro

340

345

350

Leu Glu Leu Leu Tyr Cys Leu Tyr Glu Thr Gln Glu Asp Ala Phe Val  
 355 360 365

Arg Gln Ala Leu Cys Arg Phe Pro Glu Leu Ala Leu Gln Arg Val Arg  
 370 375 380

Phe Cys Arg Met Asp Val Ala Val Leu Ser Tyr Cys Val Arg Cys Cys  
 385 390 395 400

Pro Ala Gly Gln Ala Leu Arg Leu Ile Ser Cys Arg Leu Val Ala Ala  
 405 410 415

Gln Glu Lys Lys Lys Lys Ser Leu Gly Lys Arg Leu Gln Ala Ser Leu  
 420 425 430

Gly Gly Gly Ser Ser Gln Gly Thr Thr Lys Gln Leu Pro Ala Ser Leu  
 435 440 445

Leu His Pro Leu Phe Gln Ala Met Thr Asp Pro Leu Cys His Leu Ser  
 450 455 460

Ser Leu Thr Leu Ser His Cys Lys Leu Pro Asp Ala Val Cys Arg Asp  
 465 470 475 480

Leu Ser Glu Ala Leu Arg Ala Ala Pro Ala Leu Thr Glu Leu Gly Leu  
 485 490 495

Leu His Asn Arg Leu Ser Glu Ala Gly Leu Arg Met Leu Ser Glu Gly  
 500 505 510

Leu Ala Trp Pro Gln Cys Arg Val Gln Thr Val Arg Val Gln Leu Pro  
 515 520 525

Asp Pro Gln Arg Gly Leu Gln Tyr Leu Val Gly Met Leu Arg Gln Ser  
 530 535 540

Pro Ala Leu Thr Thr Leu Asp Leu Ser Gly Cys Gln Leu Pro Ala Pro  
 545 550 555 560

Met Val Thr Tyr Leu Cys Ala Val Leu Gln His Gln Gly Cys Gly Leu  
 565 570 575

Gln Thr Leu Ser Leu Ala Ser Val Glu Leu Ser Glu Gln Ser Leu Gln  
 580 585 590

Glu Leu Gln Ala Val Lys Arg Ala Lys Pro Asp Leu Val Ile Thr His  
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Pro Ala Leu Asp Gly His Pro Gln Pro Pro Lys Glu Leu Ile Ser Thr  
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Phe  
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<400> 3

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His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr  
 35 40 45

Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln  
 50 55 60

Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg  
 65 70 75 80

Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe  
 85 90 95

Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr  
 100 105 110

Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys  
 115 120 125

Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser  
 130 135 140

Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser His Leu Tyr Gln Ala Leu  
 145 150 155 160

Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala  
 165 170 175

Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro  
 180 185 190

Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu  
 195 200 205

Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg









1175	1180	1185
Glu Glu Gly Met Leu Leu 1190	Glu Lys Pro Ala Arg 1195	Val Glu Leu His 1200
His Ile Val Leu Glu Asn 1205	Pro Ser Phe Ser Pro 1210	Leu Gly Val Leu 1215
Leu Lys Met Ile His Asn 1220	Ala Leu Arg Phe Ile 1225	Pro Val Thr Ser 1230
Val Val Leu Leu Tyr His 1235	Arg Leu His Pro Glu 1240	Glu Val Thr Phe 1245
His Leu Tyr Leu Ile Pro 1250	Ser Asp Cys Ser Ile 1255	Arg Lys Glu Leu 1260
Glu Leu Cys Tyr Arg Ser 1265	Pro Gly Glu Asp Gln 1270	Leu Phe Ser Glu 1275
Phe Tyr Val Gly His Leu 1280	Gly Ser Gly Ile Arg 1285	Leu Gln Val Lys 1290
Asp Lys Lys Asp Glu Thr 1295	Leu Val Trp Glu Ala 1300	Leu Val Lys Pro 1305
Gly Asp Leu Met Pro Ala 1310	Thr Thr Leu Ile Pro 1315	Pro Ala Cys Ile 1320
Ala Val Pro Ser Pro Leu 1325	Asp Ala Pro Gln Leu 1330	Leu His Phe Val 1335
Asp Gln Tyr Arg Glu Gln 1340	Leu Ile Ala Arg Val 1345	Thr Ser Val Glu 1350
Val Val Leu Asp Lys Leu 1355	His Gly Gln Val Leu 1360	Ser Gln Glu Gln 1365
Tyr Glu Arg Val Leu Ala 1370	Glu Asn Thr Arg Pro 1375	Ser Gln Met Arg 1380
Lys Leu Phe Ser Leu Ser 1385	Gln Ser Trp Asp Arg 1390	Lys Cys Lys Asp 1395
Gly Leu Tyr Gln Ala Leu 1400	Lys Glu Thr His Pro 1405	His Leu Ile Met 1410
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Leu	Gln	Lys	Ile	Pro	His	Lys	Glu	Val	Asp	Lys	Ala	Asp	Gly	Lys	Gln				
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Leu	Val	Glu	Ile	Leu	Thr	Thr	His	Cys	Asp	Ser	Tyr	Trp	Val	Glu	Met				
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Ala	Ser	Leu	Gln	Val	Phe	Glu	Lys	Met	His	Arg	Met	Asp	Leu	Ser	Glu				
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Arg	Ala	Lys	Asp	Glu	Val	Arg	Glu	Ala	Ala	Leu	Lys	Ser	Phe	Asn	Lys				
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Arg	Lys	Pro	Leu	Ser	Leu	Gly	Ile	Thr	Arg	Lys	Glu	Arg	Pro	Pro	Leu				
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Asp	Val	Asp	Glu	Met	Leu	Glu	Arg	Phe	Lys	Thr	Glu	Ala	Gln	Asp	Lys				
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Asp	Asn	Arg	Cys	Arg	Tyr	Ile	Leu	Lys	Thr	Lys	Phe	Arg	Glu	Met	Trp				
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Lys	Ser	Trp	Pro	Gly	Asp	Ser	Lys	Glu	Val	Gln	Val	Met	Ala	Glu	Arg				
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Tyr	Lys	Met	Leu	Ile	Pro	Phe	Ser	Asn	Pro	Arg	Val	Leu	Pro	Gly	Pro				
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Phe	Ser	Tyr	Thr	Val	Val	Leu	Tyr	Gly	Pro	Ala	Gly	Leu	Gly	Lys	Thr				
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Thr	Leu	Ala	Gln	Lys	Leu	Met	Leu	Asp	Trp	Ala	Glu	Asp	Asn	Leu	Ile				
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His	Lys	Phe	Lys	Tyr	Ala	Phe	Tyr	Leu	Ser	Cys	Arg	Glu	Leu	Ser	Arg				
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Leu	Gly	Pro	Cys	Ser	Phe	Ala	Glu	Leu	Val	Phe	Arg	Asp	Trp	Pro	Glu				
225					230					235					240				
Leu	Gln	Asp	Asp	Ile	Pro	His	Ile	Leu	Ala	Gln	Ala	Arg	Lys	Ile	Leu				
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Phe	Val	Ile	Asp	Gly	Phe	Asp	Glu	Leu	Gly	Ala	Ala	Pro	Gly	Ala	Leu				
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Ile	Glu	Asp	Ile	Cys	Gly	Asp	Trp	Glu	Lys	Lys	Lys	Pro	Val	Pro	Val				
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Leu	Leu	Gly	Ser	Leu	Leu	Asn	Arg	Val	Met	Leu	Pro	Lys	Ala	Ala	Leu				
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Leu	Val	Thr	Thr	Arg	Pro	Arg	Ala	Leu	Arg	Asp	Leu	Arg	Ile	Leu	Ala				
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Arg Ala Tyr Phe Leu Arg His Phe Gly Asp Glu Asp Gln Ala Met Arg  
340 345 350

Ala Phe Glu Leu Met Arg Ser Asn Ala Ala Leu Phe Gln Leu Gly Ser  
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Ala Pro Ala Val Cys Trp Ile Val Cys Thr Thr Leu Lys Leu Gln Met  
370 375 380

Glu Lys Gly Glu Asp Pro Val Pro Thr Cys Leu Thr Arg Thr Gly Leu  
385 390 395 400

Phe Leu Arg Phe Leu Cys Ser Arg Phe Pro Gln Gly Ala Gln Leu Arg  
405 410 415

Gly Ala Leu Arg Thr Leu Ser Leu Leu Ala Ala Gln Gly Leu Trp Ala  
420 425 430

Gln Thr Ser Val Leu His Arg Glu Asp Leu Glu Arg Leu Gly Val Gln  
435 440 445

Glu Ser Asp Leu Arg Leu Phe Leu Asp Gly Asp Ile Leu Arg Gln Asp  
450 455 460

Arg Val Ser Lys Gly Cys Tyr Ser Phe Ile His Leu Ser Phe Gln Gln  
465 470 475 480

Phe Leu Thr Ala Leu Phe Tyr Thr Leu Glu Lys Glu Glu Glu Glu Asp  
485 490 495

Arg Asp Gly His Thr Trp Asp Ile Gly Asp Val Gln Lys Leu Leu Ser  
500 505 510

Gly Val Glu Arg Leu Arg Asn Pro Asp Leu Ile Gln Ala Gly Tyr Tyr  
515 520 525

Ser Phe Gly Leu Ala Asn Glu Lys Arg Ala Lys Glu Leu Glu Ala Thr  
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Phe Gly Cys Arg Met Ser Pro Asp Ile Lys Gln Glu Leu Leu Arg Cys  
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Asp Ile Ser Cys Lys Gly Gly His Ser Thr Val Thr Asp Leu Gln Glu  
565 570 575

Leu Leu Gly Cys Leu Tyr Glu Ser Gln Glu Glu Glu Leu Val Lys Glu  
580 585 590

Val Met Ala Gln Phe Lys Glu Ile Ser Leu His Leu Asn Ala Val Asp  
595 600 605

Val Val Pro Ser Ser Phe Cys Val Lys His Cys Arg Asn Leu Gln Lys  
610 615 620

Met Ser Leu Gln Val Ile Lys Glu Asn Leu Pro Glu Asn Val Thr Ala  
625 630 635 640

Ser Glu Ser Asp Ala Glu Val Glu Arg Ser Gln Asp Asp Gln His Met  
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aaaaaaaaaaaa aaaa 2054

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<223> wherein "n" is equal to A, C, G, or T.

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ggtgcagggg cagggacagg gctgccccgg agtggcacca gaggtgaccg agggggccaa 180  
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Ala Leu Leu Leu Val Thr Thr Arg  
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Val

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1 5 10 15

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<212> DNA

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ctcagcagtc cgaagaggaa

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 35 40 45

Gly Ser Gln Glu His Gly Leu Cys Ala His Leu Trp Gly Leu Cys Ser  
 50 55 60

Leu Ala Ala Asp Gly Ile Trp Asn Gln Lys Ile Leu Phe Glu Glu Ser  
 65 70 75 80

Asp Leu Arg Asn His Gly Leu Gln Lys Ala Asp Val Ser Ala Phe Leu  
 85 90 95

Arg Met Asn Leu Phe Gln Lys Glu Val Asp Cys Glu Lys Phe Tyr Ser  
 100 105 110

Phe Ile His Met Thr Phe Gln Glu Phe Phe Ala Ala Met Tyr Tyr Leu  
 115 120 125

Leu Glu Glu Glu Lys Glu Gly Arg Thr Asn Val Pro Gly Ser Arg Leu

130 135 140

Lys	Leu	Pro	Ser	Arg	Asp	Val	Thr	Val	Leu	Leu	Glu	Asn	Tyr	Gly	Lys
145					150					155					160
Phe	Glu	Lys	Gly	Tyr	Leu	Ile	Phe	Val	Val	Arg	Phe	Leu	Phe	Gly	Leu
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Val	Asn	Gln	Glu	Arg	Thr	Ser	Tyr	Leu	Glu	Lys	Lys	Leu	Ser	Cys	Met
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Ile	Ser	Gln	Gln	Ile	Arg	Leu	Glu	Leu	Leu	Lys	Trp	Ile	Glu	Val	Lys
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Tyr	Cys	Leu	Tyr	Glu	Met	Gln	Glu	Glu	Asp	Phe	Val	Gln	Arg	Ala	Met
225					230					235					240
Asp	Tyr	Phe	Pro	Lys	Ile	Glu	Ile	Asn	Leu	Ser	Thr	Arg	Met	Asp	His
				245					250					255	
Met	Val	Ser	Ser	Phe	Cys	Ile	Glu	Asn	Cys	His	Arg	Val	Glu	Ser	Leu
			260					265					270		
Ser	Leu	Gly	Phe	Leu	His	Asn	Met	Pro	Lys	Glu	Glu	Glu	Glu	Glu	Glu
		275					280					285			
Lys	Glu	Gly	Arg	His	Leu	Asp	Met	Val	Gln	Cys	Val	Leu	Pro	Ser	Ser
	290					295					300				
Ser	His	Ala	Ala	Cys	Ser	His	Gly	Leu	Gly	Arg	Cys	Gly	Leu	Ser	His
305					310					315					320
Glu	Cys	Cys	Phe	Asp	Ile	Ser	Leu	Val	Leu	Ser	Ser	Asn	Gln	Lys	Leu
				325					330					335	
Val	Glu	Leu	Asp	Leu	Ser	Asp	Asn	Ala	Leu	Gly	Asp	Phe	Gly	Ile	Arg
			340					345					350		
Leu	Leu	Cys	Val	Gly	Leu	Lys	His	Leu	Leu	Cys	Asn	Leu	Lys	Lys	Leu
		355					360					365			
Trp	Leu	Val	Asn	Ser	Ala	Leu	Arg	Gln	Ser	Val	Val	Gln	Leu	Cys	Pro
	370					375					380				
Arg	Tyr	Ser	Ala	Leu	Ile	Arg	Ile	Ser	Arg	Thr	Phe	Thr	Ala	Arg	Gln
385					390					395					400
His	Ser	Arg	Arg	Gln	Gly	Ile	Lys	Leu	Leu	Cys	Glu	Gly	Leu	Leu	His
				405				410						415	
Pro	Asp	Cys	Lys	Leu	Gln	Val	Leu	Glu	Leu	Asp	Asn	Cys	Asn	Leu	Thr
			420					425				430			
Ser	His	Cys	Cys	Trp	Asp	Leu	Ser	Thr	Leu	Leu	Thr	Ser	Ser	Gln	Ser
		435					440					445			
Leu	Arg	Lys	Leu	Ser	Leu	Gly	Asn	Asn	Asp	Leu	Gly	Asp	Leu	Gly	Val
	450					455					460				

Met Met Phe Cys Glu Val Leu Lys Gln Gln Ser Cys Leu Leu Gln Asn  
465 470 475 480

Leu Gly Leu Ser Glu Met Tyr Phe Asn Tyr Glu Thr Lys Ser Ala Leu  
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Glu Thr Leu Gln Glu Glu Lys Pro Glu Leu Thr Val Val Phe Glu Pro  
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Ser Trp

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<213> homo sapiens

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Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Leu Ala Asn Lys Ala  
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His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr  
35 40 45

Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln  
50 55 60

Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg  
65 70 75 80

Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe  
85 90 95

Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr  
100 105 110

Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys  
115 120 125

Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser  
130 135 140

Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser Leu Leu Tyr Gln Ala Leu  
145 150 155 160

Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala  
165 170 175

Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro  
180 185 190

Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu  
195 200 205

Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg  
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 tctcccgga tcttgaggtc acatgcgtgg tgggtggacgt aagccacgaa gaccctgagg 180  
 tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 240  
 aggagcagta caacagcacg tacctgtgtg tcagcgtcct caccgtcctg caccaggact 300  
 ggctgaatgg caaggagtac aagtgcagg tctccaacaa agccctcca acccccatcg 360  
 agaaaaccat ctcaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 420  
 catcccgga tgagctgacc aagaaccagg tcagcctgac ctgcctggtc aaaggcttct 480  
 atccaagcga catcgccgtg gagtgggaga gcaatgggca gccggagaac aactacaaga 540  
 ccacgcctcc cgtgctggac tccgacggct ccttcttct ctacagcaag ctcaccgtgg 600  
 acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggetctgc 660  
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